

CAPITAL CITY AIRPORT

(Capital City Airport, Hughes Flying Service)  
West ramp area, North side of Grand River Avenue  
Lansing Vicinity  
Clinton County  
Michigan

HAER No. MI-320-C

HAER  
MICH  
19-LANDOV,  
IC-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD

Northeast Field Area  
Chesapeake/Allegheny System Support Office  
National Park Service  
U.S. Custom House  
200 Chestnut Street  
Philadelphia, PA 19106

HISTORIC AMERICAN ENGINEERING RECORD

HAER  
MICH  
19-LANOV,  
IB-

CAPITAL CITY AIRPORT, Hughes Flying Service HAER No. MI-320-C

Location: Capital City Airport, West Ramp Area  
Lansing vicinity, Clinton County, Michigan

UTM: 16.696210.4738420  
Quad: Lansing North, 1:24,000

Date of Construction: 1940, 1943, and 1948

Engineer: Harold J. Olver, State of Michigan, Board of Aeronautics  
Architect: None

Present Owner: Capital Region Airport Authority  
Capital City Airport  
Lansing, Michigan

Present Occupants: Vacant

Present Use: Vacant

Significance: The Hughes Flying Service buildings are significant for their role in the training of pilots during World War II under the Civilian Pilots Training Program. Future commercial pilots enrolled in the program to receive ground and flight training at the Capital City Airport, before being transferred elsewhere for solo and advanced flight training. This training was also provided by Francis Aviation in the adjacent buildings.

Project Information: The Hughes Flying Service buildings are identified airport hazards under the Federal Aviation Administration (FAA) standards, and are scheduled for removal. During an environmental review (1988), the State Historic Preservation Officer determined that the buildings meet the criteria for inclusion in the National Register of Historic Places and, therefore, would require mitigation of the adverse effect caused by their removal. The Memorandum of Agreement (1995) stipulates documentation of the Hughes Flying Service buildings according to HAER guidelines. This documentation was undertaken to fulfill that stipulation.

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Refer to the Overview Report MI-320 for a more complete description of the history of aviation and its ties to the Lansing area. Establishment of fixed base operators at the Capital City Airport is covered more fully in the narrative text of the Overview Report. The documentation of this individual element provides a more specific history and significance of the Hughes Aviation buildings in their context of the Capital City Airport.

Determining the significance of the Hughes buildings requires consideration of the person, Harvey Hughes, acknowledgement of a parallel business, Francis Aviation, and study of previous buildings on the site and their transfer to Hughes. The story of Babe Weyant Ruth should also be integrated with the history of the Hughes Aviation buildings, as well as with the Capital City Airport. Refer to the Overview Report MI-320 for a more complete description of her history and connection to development of the Capital City Airport.

Harvey Hughes got his start in aviation when he soloed for Art Davis, one of Lansing's early leading commercial flyers, in 1929 to acquire his pilot's license. Davis' advice to Hughes on how to make a living as a pilot was to barnstorm across the country. So Hughes left Lansing, as he so candidly said, "it being about the only thing to do in those days" (Wagner 1979). Davis made Hughes a proposition to go 50:50 on his first plane, a 1928 Kreider-Reisner "Challenger", with an OX-5 powered engine, made in Hagerstown, Maryland. From 1929 until 1934, Hughes flew to Florida, Texas, California, and all points in between, performing stunts, participating in races, and providing transportation.

While Hughes was away, Capital City Airport began operation and underwent its initial investment by fixed base operators. The Club Hangar was erected in 1927, and three private fixed base operators erected hangars soon thereafter. The contractor for at least two of the hangars, including the SKF Hangar, was Hank Reniger of Reniger Construction Company based in Lansing, Michigan. It is likely that Reniger erected the other two hangars as well, but this has not been confirmed. The Hangars were typically constructed from standard plans using all metal components, including structural framing, roof trusses, exterior cladding, commercial windows, and hangar doors. The original grass East-West landing strip was lengthened and widened, and a shorter North-South strip alongside of the hangars was added. During these early years, operation of the airport was awarded as a contract to individual fixed base operators. The contract to operate Capital City Airport for 1928 was awarded to the SKF Air Service Inc. by the Lansing Chamber of Commerce, which included complete supervision of the field during that period of time (Lansing Airport News 1928).

Eventually Hughes decided to settle down and establish his own fixed base operation in Lansing. For two years, he operated out of the Foster/Davis hangar until 1936 when he leased the SKF hangar from Seymour K. Fowler. The all metal SKF Hangar, which measured 60' x 120', was oriented with openings to the north and south, and had a small lean-to office attached to its west side. Some time later, Mr. Fowler, who had a five-and-dime store in Lansing and didn't need his hangar business for income, accepted Hughes' offer to assume SKF's business and included 3 planes as part of the sale.

In addition to his other flight services, Hughes had the local dealership for Aeronca planes. He soon needed a more substantial office building from which to run his growing business, and in which to hold flight school classes. In 1940 he built a one-story office, with a full basement, of concrete block and wood frame construction to the south of his SKF Hangar on additional land leased from the Board of Aeronautics. The design appears to have been influenced by the larger and grander scale of the new

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State Hangar built in 1939. A special feature of Hughes' office building was its semi-circular observation room projecting beyond the face of the other buildings to provide a better view of the adjacent runway. The main floor interior was finished with knotty pine board paneling. Hughes' corner office also faced out onto the runway and toward his hangar. A small room on the main floor was used by his long time instructor, G. Richard March, and his students. During the 1950s Hughes filled in an outside corner space of the building for a second instructor's room, where Babe Weyant Ruth instructed for Hughes for a short time (Hughes 1992). A secretary occupied the projecting observation office. The basement was used as a classroom which could accommodate anywhere from 20 to 30 students, and was used during Hughes' participation in the Civilian Pilot Training program. The basement encompasses approximately 854 square feet, and the ground floor approximately 978 square feet.

In early 1941, a terrible fire destroyed Hughes' SKF Hangar (Patterson 1992). Fourteen planes were lost, and the cause was unknown (Hughes 1992). Luckily he had built his new office building the year before, had relocated his business papers, and had space for his continued flight instruction classes. As most of the planes lost in the fire were those provided by the Federal Government for use in the Civilian Pilots Training Program, these were quickly replaced to continue the training. Prior to being able to rebuild his hangar, Hughes rented space in the Old State Hangar for storage of his planes, as it had been vacated only the year before when construction of the new State Hangar was completed.

A business parallel to Hughes Flying Service at Capital City Airport during the 1940s was Francis Aviation. In the early 40s, both companies were contracted to provide ground and dual-control flight training as part of the Civilian Pilots Training Program. This program was implemented near the beginning of World War II to train three hundred pilots per month prior to their employment in commercial aviation. Hughes and Francis each trained one hundred and fifty pilots per month, and provided one additional week of classroom instruction, followed by 10 hours of dual-control flying time. (Refer to the Overview Report MI-320 for additional description of the instruction program.) People who received training in the CPTP went on to military service or commercial aviation, with some pilots coming back to visit Hughes years later. Other federal programs, such as the War Training Service, which employed Babe Weyant Ruth, provided flight training for military pilots. Three weeks of classroom instruction were provided on the campus of Michigan State College, then their training was continued at the Capital City Airport. After the war, Hughes had a contract to sell surplus World War II planes.

In 1943 Hughes was able to rebuild his hangar with an entirely new design that was likely provided by the Board of Aeronautics. Unsigned drawings dated January 1943 show a 60' x 60' repair hangar facing due east with maintenance and repair shops, a classroom, and a series of T-hangars consisting of five stalls, directly behind. A second row of T-hangars, consisting of nine stalls, was constructed alongside the first row. All of the hangars were constructed of concrete block walls reinforced with steel columns, and wood roofs, and together encompassed approximately 11,736 square feet. The new east-west hangar orientation appeared to be more practical, matching those of the Foster/Davis/Francis and new State Hangar. In contrast, the SKF Hangar had been oriented to the north-south. Also similar to the new State Hangar was the heavy timber roof truss that was used to span Hughes' new 60'-0" front hangar space and support the elliptical roof.

As a consequence of Hughes's first fire at the SKF Hangar, the new State Hangar was modified and a fire truck stored inside for use in future emergencies. (Refer to the Overview Report MI-320-A

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for a more complete description of the modifications to the State Hangar.) The importance of mentioning this in this report is the proximity of a fire-fighting vehicle when, as it happened, Hughes Flying Service suffered a second fire. In 1948, an electrical drop cord ignited fresh dope being used to weatherproof the inside of the fuselage of one of Hughes' airplanes (Patterson 1992). Only the front repair hangar burned; the T-hangars and the planes stored in them were not damaged by the fire. The repair hangar was reconstructed within the year, with minor modifications to the original design. Using the same foundation, pilasters were added to support closer spacing of the trusses, going from 16'-0" on center to 12'-0" on center, and extending the hangar back 15'-0" to the concrete wall of the classroom to create a 60' x 75' open space. The truss design was also modified. This is evidenced by comparing the photographs of the original hangar with drawings of the reconstructed hangar.

In December of 1981 Hughes sold his business and buildings to Hangar Services, Inc., otherwise known as CAM AIR. Once purchased, Hangar Services did little to change the buildings, all of which the company used, except remodeling the basement of the office building in 1987. In June of 1992, Hangar Services, Inc. vacated its property after selling it to the Capital Region Airport Authority for the purposes of airport expansion, and compliance with FAA regulations requiring a wider clear zone associated with the runways. Currently the T-hangars are suffering severe deterioration and can no longer be used; the roofs have leaked, causing the rafters to rot and fall into the hangar spaces.

## SOURCES OF INFORMATION

### A. ENGINEERING DRAWINGS

*Hughes Aviation School.* 1943. No original drawings. Two fair quality blueprints of plans, elevations, and footing details of the Repair and T-hangers are on file in the offices of the Capital Region Airport Authority.

*Hughes Flying Service Hanger.* 1948. Michigan Department of Aeronautics. Drawn by Olver. Two pencil on vellum drawings of repair hanger reconstructed after 1948 fire destroyed the original, are on file in the offices of the Capital Region Airport Authority. Truss spacing and design have been modified.

*Airport Master Plan Drawings.* 1949 - 1986. The Capital Region Airport Authority maintains drawing files and a collection of historic drawings in their offices at the Capital City Airport. Quality varies from excellent ink on linen originals to poor quality blue-line diazo prints.

### B. HISTORIC VIEWS

*SKF Hanger: Exterior.* 1929. Photographed by R. C. Leavenworth. Lansing, Michigan. Private collection of Babe Weyant Ruth. Photographed for Hank Reniger the same year his company completed the construction.

*Foster and SKF Hangars.* (1929). Lansing, Michigan. Private collection of Babe Weyant Ruth. The small rectangular shed in the foreground is the outhouse toilets.

*Hughes Flying Service.* 1943. Lansing, Michigan. Private collection of Harvey Hughes. The photographs show three views of Harvey's new Repair and T - hangars under construction in 1943. One view shows Harvey's office building to the south, definitely dating its construction as prior to the new hangars. The view with the full truss elevation shows a pattern distinct from the current truss design, when the repair hangar was reconstructed in 1948; it also shows the walls of the T - hangars to the north of the repair hangar, prior to construction of their roofs. The third view shows the crane being used to set the trusses, and a clear view of the south elevation of the repair hangar.

### C. INTERVIEWS

Hughes, Harvey. Interview with the author. Lansing, Michigan, 4 May 1992. Harvey's association with the Capital City Airport was as a fixed base operator from 1936 until the mid-1980's.

Patterson, Ned. Interview with the author. Lansing, Michigan, 9 April and 7 May 1992. Ned's association with the Capital City Airport was as an employee of the Michigan Board of Aeronautics from 1940 until his retirement in 1986.

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Ruth, Babe Weyant. Interview with the author. Lansing, Michigan, 7 May 1992. Babe's association with the Capital City Airport was as an aviator, flight instructor, and unofficial historian of the airport from the early 1930's until the present (1992).

D. BIBLIOGRAPHY

Ball, R.S. 1953 *A Chronology of Michigan Aviation, 1834-1953*. Lansing: Michigan Department of Aeronautics. Copies are available at the Michigan Aeronautics Commission Offices.

*Lansing Airport News: Airport Dedication Number*. June 1928. Making History: 5-6, 8; Lansing's Airmen: 7; Aero Club of Lansing Inc.: 8; A New Lansing Industry: 9, 33; Airport Government: 13; Aerial Photography: 17, 35; Local Airways Firm Starts Second Year of Operation; Michigan, Lansing and Air Mail; Michigan State Police and Aviation: 12, 21; New Air Service Firm Organized in Lansing. A photocopy of the original program is in the collection of Babe Weyant Ruth. There are no known additional copies.

*Michigan Aviation: 1929 -1979*. MAC 50<sup>th</sup> Anniversary Association. From 1929 to 1979 - A History of the Michigan Aeronautics Commission: 47-49; 1979 - Golden Anniversary of the Ninety-Nines: 50; Chronological Highlights of Michigan Aviation 1929 -1979: 52-58; and, Michigan Notables: 61. A copy of this commemorative issue was found in the Pamphlet File in the Ann Arbor, Public Library, Ann Arbor, Michigan. The chronological highlights are edited from the R.S. Ball document listed above. There are no known additional copies.

John Wagner. 1979. Harvey Hughes. *Michigan Aviation*, April.